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ABSTRACT

This chapter introduces teachers and other education professionals to the assessment of occupational stress. It begins with a brief discussion of what occupational stress is, and overview of the consequences of prolonged stress, and a review of the common causes of teacher stress. Next, it presents methods for reducing occupational stress through organizational and individual initiatives. Finally, it reviews psychological tests that can be used to assess types and sources of stress within schools. (Contains 22 references.) (GCP)

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Assessment of Workplace Stress: Occupational Stress, Its Consequences, and Common Causes of Teacher Stress

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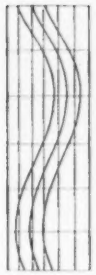

Chapter 43
Assessment of Workplace Stress
Occupational Stress, Its Consequences, and Common Causes of Teacher Stress

Jo-Ida C. Hansen & Brandon A. Sullivan

There is now overwhelming evidence of what many educators have known for years: Teaching is a highly stressful occupation. In fact, teachers throughout the world deal with a substantial amount of ongoing occupational stress (e.g., Guglielmi & Tatrow, 1998; Kyriacou & Sutcliffe, 1978; Pithers & Soden, 1998; Borg, 1990). As a result, for the past 25 years there has been an active subfield within educational psychology and occupational health psychology focused on what is termed "teacher stress" (see Kyriacou, 2001, for a discussion). The high level of stress associated with teaching has serious implications for the healthy functioning of individual teachers and schools, and entire school systems. Because this stress can take a variety of forms and have many different sources, a comprehensive assessment is an important component of any stress reduction effort.

In this chapter we introduce teachers and other education professionals to the assessment of occupational stress. We begin with a brief discussion of what occupational stress is, an overview of the consequences of prolonged stress, and a review of the common causes of teacher stress. Next, we present methods for reducing occupational stress through organizational and individual initiatives. Finally, we review psychological tests that can be used to assess types and sources of stress within schools.

Occupational Stress and Its Consequences

Teacher stress has been defined as "the experience by a teacher of unpleasant, negative emotions, such as anger, anxiety, tension, frustration, or depression, resulting from some aspect of their work as a teacher" (Kyriacou, 2001, p. 28). This definition probably is close to what most teachers mean when they talk about stress. For purposes of

assessment and intervention, however, it is important to distinguish among the components of stress.

Three major components of stress come together to produce the distressing experiences described above. The first is the *stressor,* an event or series of events that occur in the work environment. For example, a group of loud and disruptive students, or rude and disparaging parents, are stressors that teachers may encounter. The second component of stress encompasses the psychological and physiological effects of the stressor on the person. These effects are referred to as *strain* and are what people usually mean when they use the word *stress.* For example, if a teacher's muscles tense and she becomes frustrated and angry when told that class sizes will increase by 10 percent next year, these physical and psychological reactions to the announcement are strain.

Not all stressors inevitably lead to strain, or to the same level of strain, in every person because a third component, called *appraisal,* influences how a person reacts to a stressor. Appraisal involves judgments about the degree of threat a stressor presents and an evaluation of whether sufficient resources are available to cope with the stressor. For example, if a teacher working with unmotivated students sees the situation as a minor irritant and more of a threat to the students' own futures than anything else, this situation is unlikely to lead to a high level of strain. If another teacher in the same situation sees the situation as intolerable and considers his failure to motivate the students as reflective of a personal failure as a teacher, he is likely to perceive the situation as threatening and experience a high level of strain. In other words, how a person interprets an event can influence how stressful it is. Similarly, if a teacher believes that she does not have the energy, skills, or support to deal successfully with the situation, the strain will be greater than if the teacher believes she has access to adequate resources.

Occupational stress can be addressed by removing or changing stressors, reducing or treating the symptoms of strain, modifying appraisals, or a combination of these. Therefore, it is important to separate these components and assess each individually. For example, if a teacher is in distress, it is important to determine (a) what the major stressors in the teacher's environment are, (b) how these stressors are affecting the teacher psychologically and physiologically, and (c) how the teacher is interpreting and understanding the situation, and what resources he believes are available (or lacking). An assessment of these three components of stress illuminates the most likely methods of

addressing it. Among these three components, the strain teachers experience is the most important factor influencing individual and organizational health, but removing or reducing the stressors themselves is typically the most effective way of addressing occupational stress.

High levels of prolonged stress are harmful to the health and well-being of individual teachers, their students, and the functioning of the entire school. Individual consequences of excessive occupational stress include a host of debilitating health problems such as heart disease (Theorell & Karasek, 1996) and chronic back pain (Bigos et al., 1991). Stress also may cause psychological problems such as depression (Paykel, 1976) and a very serious condition called burnout (Cordes & Dougherty, 1993). Burnout is a state of extreme physical and psychological exhaustion resulting in negative attitudes toward work and feelings of helplessness and ineffectiveness. Burnout can occur when problems, such as an excessive workload or classroom discipline problems, are unrelenting and the chance of relief is appraised as remote (Pines & Aronson, 1988). One tricky aspect of burnout is that it develops slowly over a long period of time and therefore is difficult to diagnose. Given that burnout is easily overlooked through casual observation and that teachers experience high rates of burnout (Burke & Richardsen, 1996), the assessment of burnout among teachers and educational professionals is particularly important. The Maslach Burnout Inventory (MBI; Maslach, Jackson, & Leiter, 1996) is one useful tool in any such effort.

High levels of stress and burnout also have significant organizational consequences, including poor work performance, low job satisfaction, high levels of tardiness and absenteeism, high rates of turnover, and poor relationships between employees (see Quick, Quick, Nelson, & Hurrell, 1997, chap. 5, for a review). It is hard to imagine that any school characterized by these features would be a good place to work or attend as a student, much less that it would be reaching its potential as an educational institution. Research has shown that interventions can improve such a situation; reducing stress and burnout is likely to improve the experiences of the teachers and students, and increase the success of the school in educating its pupils. In other words, once the types and sources of stress are assessed, action can be taken to reduce and prevent the physical, psychological, and organizational toll stress takes. Assessment can also help to identify patterns of stress throughout a school or school system, as well as differences in the levels and types of stress within a school.

Factors That Cause Stress for Teachers

Although a variety of factors determine how stressful a job is, two factors are particularly important. First is the psychological demands placed on an individual. This includes the amount of time and energy a job requires and can be thought of as the number and types of stressors inherent in doing a job. The Role Overload scale on the Occupational Stress Inventory–Revised (OSI-R; Osipow, 1998), described later in this chapter, is one measure of the level of psychological demands placed on teachers. The second, and perhaps more important, factor is the amount of control a person has over her or his job (Karasek & Theorell, 1990). This includes whether the worker has freedom to determine the work pace, to decide in which order and in what way to accomplish work tasks, and to make other forms of autonomous decisions.

Jobs that are very demanding and provide little control over how the work is done are associated with the highest levels of stress and are called *high-strain jobs*. Work under high-strain conditions is a negative, psychologically draining, and unrewarding experience. In contrast, jobs that are equally demanding but also provide significant control over how the work is done are associated with much lower levels of stress and are perceived by workers as challenging and presenting opportunities for professional growth, rather than as stressful and negative. Jobs of this type are called *active jobs*.

A common example of how a high-demand, low-control situation plays out in teaching is when teachers are expected to prevent disruptions in the classroom and also are expected to accomplish this without support or assistance (see Sutton, 1984). Such a dilemma is called *role conflict* (also measured by the OSI-R) and results from conflicting demands and expectations that cause stress for the person attempting to satisfy them (Van Sell, Brief, & Schuler, 1981).

Providing teachers additional control over their work can often reduce role conflict. Even if job demands remain unchanged, providing increased control can reduce stress and prevent many of the deleterious consequences of prolonged stress. Alternatively, stress can be reduced without an increase in control if the work demands are lowered or if additional people share the demands. In terms of organizational planning and decision making, it is important to realize that increased demands on a teacher that are not accompanied by an increase in control over the work are very likely to result in higher stress levels.

Another common source of teacher stress is *role ambiguity* (see Kyriacou, 2001). Role ambiguity arises when there is a lack of clear

expectations, confusing information regarding expectations, or unclear information about how to meet expectations (Van Sell, Brief, & Schuler, 1981). An example of this would be a teacher who is told to cover specific material in class but is not given any help figuring out how best to teach the material. Role ambiguity also results if a teacher is given a classroom but no clear expectations regarding what to teach or how to deal with problems. Role ambiguity is another factor measured by the OSI-R.

Teachers face many other sources of stress that specifically increase demands on their time, energy, and patience, plus other sources that reduce their autonomy and resources. For example, teachers report that common sources of stress include students who lack motivation, discipline issues in the classroom, time pressures, and a heavy workload (see Kyriacou, 2001). Assessing the extent to which these factors are present within a school or school system can help pinpoint sources of stress and predict where future problems may arise.

What Can Be Done to Reduce Stress?

Depending upon the particular sources of stress within a given school or classroom, several approaches can be effective in reducing work-related stress. Formal assessment is an important precursor to intervention because without an accurate and objective understanding of the principal types and sources of stress within a specific school or classroom, it is impossible to design a focused and effective stress reduction program.

One way to reduce teacher stress is through job redesign. *Job redesign* involves making key changes in the work environment or the way work is organized. Identifying and removing (or modifying) specific sources of stress in the classroom and the larger work environment is one direct method of reducing stress. This might mean, for example, decreasing the number or types of demands placed on a teacher or spreading the same demands over additional people. An alternative approach is to increase the amount of control teachers have over their work. This strategy can be effective even if the amount of additional control is limited and even if it is not actually used. One example of this is integrating regular feedback from teachers into organizational decision making. Research has shown that increasing the amount of participation a person has in decision making decreases role conflict and role ambiguity (Jackson, 1983), two major sources of teacher stress. Finally, providing mechanisms that increase social and

organizational support for educators is likely to reduce stress by increasing the available coping resources.

Changing the work environment or the work process is typically the most effective method of reducing work-related stress. However, providing support services, such as workshops and counseling, can help teachers cope with existing stressors. Several types of support services have proven effective, including skill-based workshops, career development services, mentoring programs, and personal counseling.

Regardless of the approach used to address occupational stress, the process by which this is done is a key factor in its success. It is important to involve teachers in the assessment process and in discussions of what to do with the results of the assessment. Such participation in and of itself is likely to reduce stress by providing hope of positive change, a sense of connectedness with others, and a feeling of greater control over the work environment. The Job Stress Survey (JSS; Spielberger & Vagg, 1999), described in the next section, is an instrument designed to identify major sources of stress in the workplace.

Inventories to Assess Stress

In this section, we describe three instruments commonly used to assess occupational stress, the Maslach Burnout Inventory, the Occupational Stress Inventory–Revised, and the Job Stress Survey.

Maslach Burnout Inventory

The Maslach Burnout Inventory (Maslach et al., 1996) assesses the three dimensions of burnout that consistently have been identified over a wide range of occupations: emotional exhaustion, depersonalization, and reduced personal accomplishment. The multidimensional theory of burnout (Maslach, 1998) construes the individual stress experience as one that involves the person's concept of both self and others in the context of complex social relations. For example, *emotional exhaustion* is the feeling of being emotionally overextended and represents the basic individual stress dimension of burnout. *Depersonalization* is an excessively detached response to other people and represents the interpersonal dimension of burnout. The self-evaluation dimension of burnout is the feeling of *reduced personal accomplishment* or a decline in feelings of productivity and competence at work.

The original version of the MBI (MBI–Human Services Survey) was developed for use with people in social and human services. The

second version of the MBI (MBI–Educators Survey) was recommended for use in educational settings. The most recent version of the MBI (MBI–General Survey) is a generic version with three scales labeled Exhaustion, Cynicism, and Professional Efficacy.

The Emotional Exhaustion scale on the General Survey (MBI-GS) assesses depletion of emotional energy, which is different than mental or physical fatigue. The Cynicism scale reflects an indifference or distant attitude toward work as a way of coping with exhausting demands. The Professional Efficacy scale assesses satisfaction with past and present accomplishments as well as expectations for continued effectiveness at work. A high degree of burnout is represented by a low score on Professional Efficacy and high scores on Exhaustion and Cynicism.

All forms of the MBI take only 5 to 10 minutes to complete and are self-administered. The one-year test-retest reliability coefficients reported in the MBI-GS manual are .67 (Professional Efficacy), .65 (Exhaustion), and .60 (Cynicism). Confirmatory factor analyses, conducted with several samples from various occupations and countries, support the item content of the three scales. Various studies also have shown scores on the Exhaustion and Cynicism scales to be related to mental and physical strain, role conflict, and work overload. Scores on the Professional Efficacy scale are related to job involvement, access to resources, satisfaction, and organizational commitment.

An alternate form of the MBI-GS is the MBI–Educators Survey (MBI-ES) which also has three scales: Emotional Exhaustion, Depersonalization (similar to MBI-GS Cynicism), and Personal Accomplishment (similar to MBI-GS Professional Efficacy). Factor analytic studies have supported these three scales, and Cronbach alphas are reported in the manual as .90 (Emotional Exhaustion), .76 (Depersonalization), and .76 (Personal Accomplishment).

The MBI-ES can be used at district, school, and department levels to detect potential problems. Scores on the subscales, in turn, can be used to guide the development of interventions to improve the organizational climate. MBI-ES scores have been used to identify factors that relate to burnout among educators, including role conflict, participation in decision making, autonomy, role ambiguity, and social support.

Occupational Stress Inventory

The Occupational Stress Inventory–Revised (OSI-R; Osipow, 1998) assesses three dimensions of work adjustment: occupational

stresses, psychological strain, and coping resources. Each dimension is measured by several scales. The six scales that comprise the Occupational Roles Questionnaire measure stress-inducing work roles. The four scales of the Personal Strain Questionnaire assess a person's subjective responses to stresses in the workplace. The four scales in the Personal Resources Questionnaire assess a person's coping resources.

The six Occupational Roles scales of the OSI-R are Role Overload (job demands exceed resources), Role Insufficiency (skills are inappropriate to job requirements), Role Ambiguity (lack of clarity of job priorities and evaluation criteria), Role Boundary (conflicting role demands), Responsibility (excessive responsibility for others), and Physical Environment (extreme physical conditions). The four Personal Strain scales measure occupationally induced strain: Vocational Strain (problems with work quality or quantity), Psychological Strain (emotional problems experienced), Interpersonal Strain (disruption in interpersonal relationships), and Physical Strain (physical illness). The four Personal Resources scales measure four sets of coping behaviors widely reported in the literature: Recreation (regular recreational activities), Self-Care (personal activities to reduce stress), Social Support (support from others), and Rational/Cognitive Coping (systematic approach to problem solving).

The manual recommends several uses and applications for the instrument. As a screening device, the OSI-R can be used to identify individuals who are experiencing excessive stress and strain. The information garnered then can be used to help the individual develop strategies for reducing his or her stress. From an organizational perspective, the OSI-R can be used to identify sources of stress in the work environment, leading to an analysis of ways in which the environment or organization might be modified to reduce stress and feelings of strain. Finally, the OSI-R often proves useful in career counseling, especially for individuals who are considering career shifts or changes.

The OSI-R is intended for use with individuals ages 18 or older. The scores are normed on gender-specific samples of adult women and men drawn from a wide variety of work settings. The OSI-R Manual also provides normative data for six occupational groups, including an Executive Group, a Professional Group, and an Administrative Support Group (the last norms are especially appropriate for educators). The 140 items on the instrument are judged to be at the fifth-grade reading level, and the answer sheet is designed to be hand-scored.

The original OSI was published in 1981. In subsequent revisions, items were reworded or replaced to improve their clarity. These modifications have resulted in stronger evidence of reliability and validity for the OSI-R. Two types of reliability estimates are reported in the OSI-R Manual: test-retest and internal consistency (Osipow, 1998). Over a two-week interval the test-retest correlations range from .39 for Self-Care to .71 for Rational/Cognitive Coping. The test-retest coefficients are lower than those typically found for measures of traits, such as personality or interests, and more in line with measures of states such as moods. The internal consistency of the scales ranges from alphas of .70 for Self-Care to .89 for Physical Environment. The OSI-R Manual reports evidence of validity from four different sources: convergent validity studies; item factor analyses; treatment and outcome studies; and studies testing the stress, strain, and coping model.

Job Stress Survey

The Job Stress Survey (Spielberger & Vagg, 1999) assesses specific sources of occupational stress that may contribute to problems in the workplace. The JSS response format emphasizes both the individual worker's perception of the severity of the occupational stressors and the frequency with which the stressor occurs. The 30 generic items of the JSS describe job-related stressor events. Respondents then are asked to rate each event in terms of (a) the amount of adjustment that would be required for the respondent to deal with the event, and (b) the frequency of the stressor event over the past six months. The 30 JSS items were selected from items piloted on samples of police officers, teachers, managerial or professional professionals, and clerical or skilled maintenance workers. The authors of the JSS recommend using it for the identification of significant sources of occupational stress, so they can be modified to reduce or avoid adverse health-related consequences (Vagg & Spielberger, 1999).

The JSS is self-administered, takes about 10 to 15 minutes to complete, and requires a sixth-grade reading level. In addition to Severity and Frequency scores, a Stress Index Score is computed for each of the 30 stressor events (Severity x Frequency = Stress Index), and separate scores are reported for the Job Pressure and Lack of Organizational Support scales. Internal consistency coefficients for the scales range from .87 to .93. The authors suggest that managers can use employees' scores on the JSS to understand the stress experienced in an organization or work group. Individual workers can also use their scores to understand how their level of stress compares to others in the

same work group or job (Vagg & Spielberger, 1998).

Summary

Stress in the workplace has reached a critical level. In educational settings, increased workloads, longer working hours, and low salaries all contribute to high levels of employee stress that may lead to absences due to stress-related illness, impairment of coworker relationships, and feelings of hopelessness or disillusionment. Interventions for educators facing burnout and stress include training, individual therapy, and organizational change. Two types of assessment are important prior to developing interventions. The first type measures educators' levels of stress and burnout. The second type measures the work setting to identify environmental factors that contribute to feelings of stress, strain, and burnout. Taken together, assessment of the individual and the organization provides the necessary understanding of the work environment to design an effective stress reduction program.

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